

Staff Recommendations for State Water Board Ocean Protection Funds

Dominic Gregorio, Ocean Unit, State Water Board

Allan Patton, Division of Financial Assistance, State Water Board

Slides 1-17 Presented September 23, 2005

Beneficial Uses

Human Health – Contact Recreation





Postings, due to high
bacteria counts, often
storm runoff related

Closures, due to
sewage spills



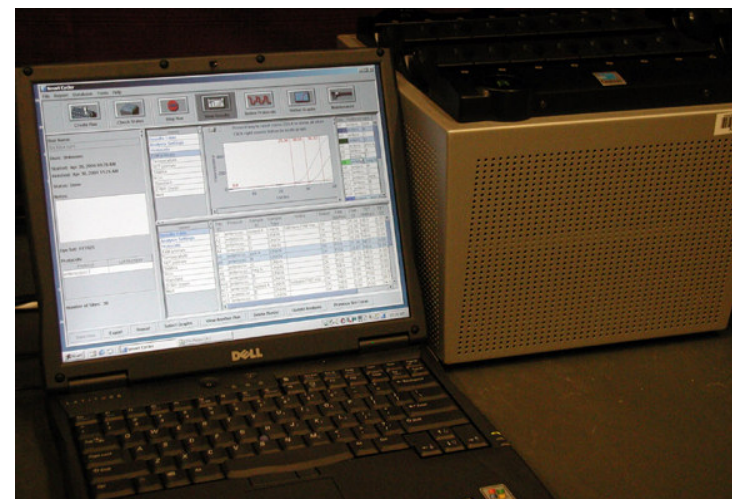
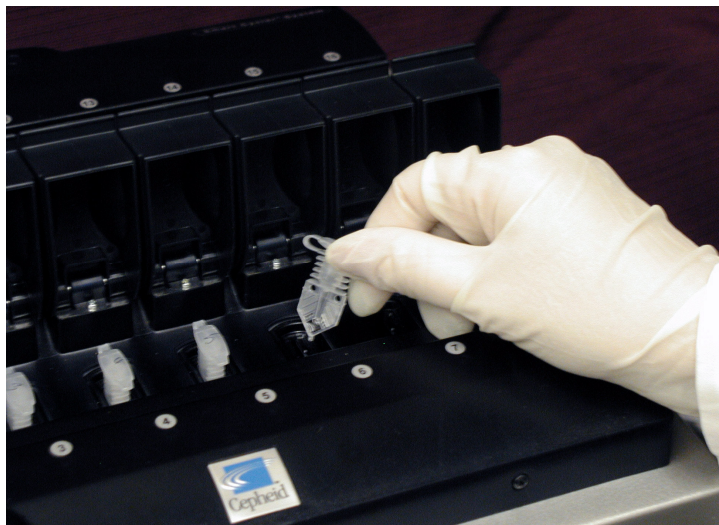
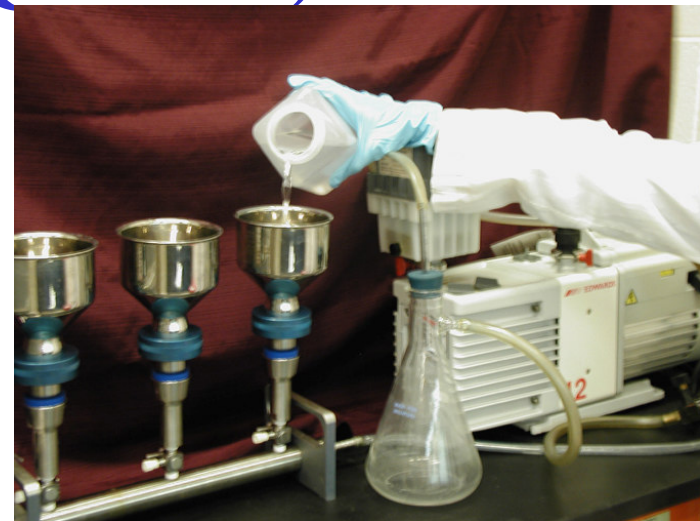
BACKGROUND

- Public concern about beach closure
- Current US EPA approved methods – next day results
- AB 639 – develop Rapid Indicators
- SWRCB Clean Beach Initiative (CBI) – Rapid Indicators a priority

RAPID DIAGNOSTOC METHODS FOR MEASURING BATERIA INDICATORS

- State Board contracted with the Southern California Coastal Water Research Project (SCCWRP)
- Collaboration with local, state, federal and private partners
- Promising Technologies!

Quantitative Polymerase Chain Reaction (Q PCR)

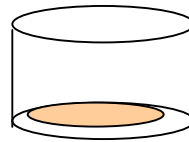


Transcription Mediated Amplification (TMA) Assay

Filter sample (100 ml) Transfer filter to lysis container

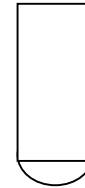


Add lysis solutions



Lyse bacteria on filter

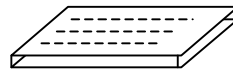
Take 1 ml lysate



Add magnetic particles



Add rRNA target and amp reagents to 96 well plate



Magnetic separation



Read plate in engine

Dual Wavelength Fluorimetry

Uses a dual wavelength fluorimeter to detect bacteria by radiometric measurement



Carmel Bay ASBS

Contact Recreation and Marine Life Beneficial Uses





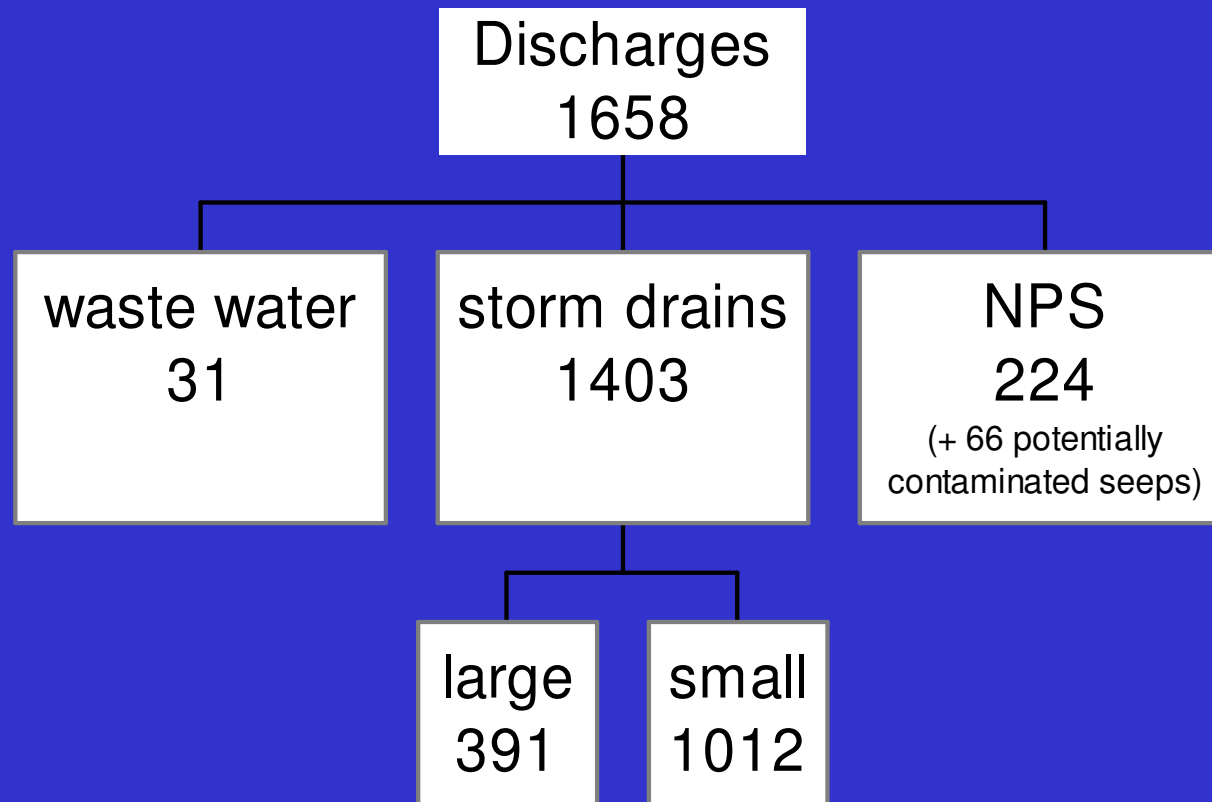
Beneficial Uses - Protecting Marine Life

Areas of Special Biological Significance (ASBS)

- 34, designated in the 1970s by the State Water Resources Control Board
- Regulated through the California Ocean Plan
- Ocean Plan: “*Waste shall not be discharged to designated Areas of Special Biological Significance...*”
- Public Resources Code: ASBS are a subset of State Water Quality Protection Areas

Source: Final Report: Discharges into State Water Quality Protection Areas, SCCWRP, July 2003

Statewide ASBS/SWQPA Discharges





Laguna Point to Latigo Point ASBS, in Malibu

Mystery drain...

Dry weather flows

24-Mugu Lagoon to Latigo Point

Drainages
 ● Discharges
 ▲ Outlets
 ☆ Potentials
 □ SWQPA Boundary



0 6 12 Miles

McWay Falls

Julia Pfeiffer Burns ASBS

Before 1983, when road clearing operations dumped sediment into the ASBS

February 2003, the only cove in California with a waterfall is now filled in



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Records Project, www.Californiacoastline.org

Scripps Institution of Oceanography and the Birch Aquarium

San Diego-Scripps ASBS



Structural BMPs - Laguna Beach Heisler Park ASBS



La Jolla ASBS/SWQPA

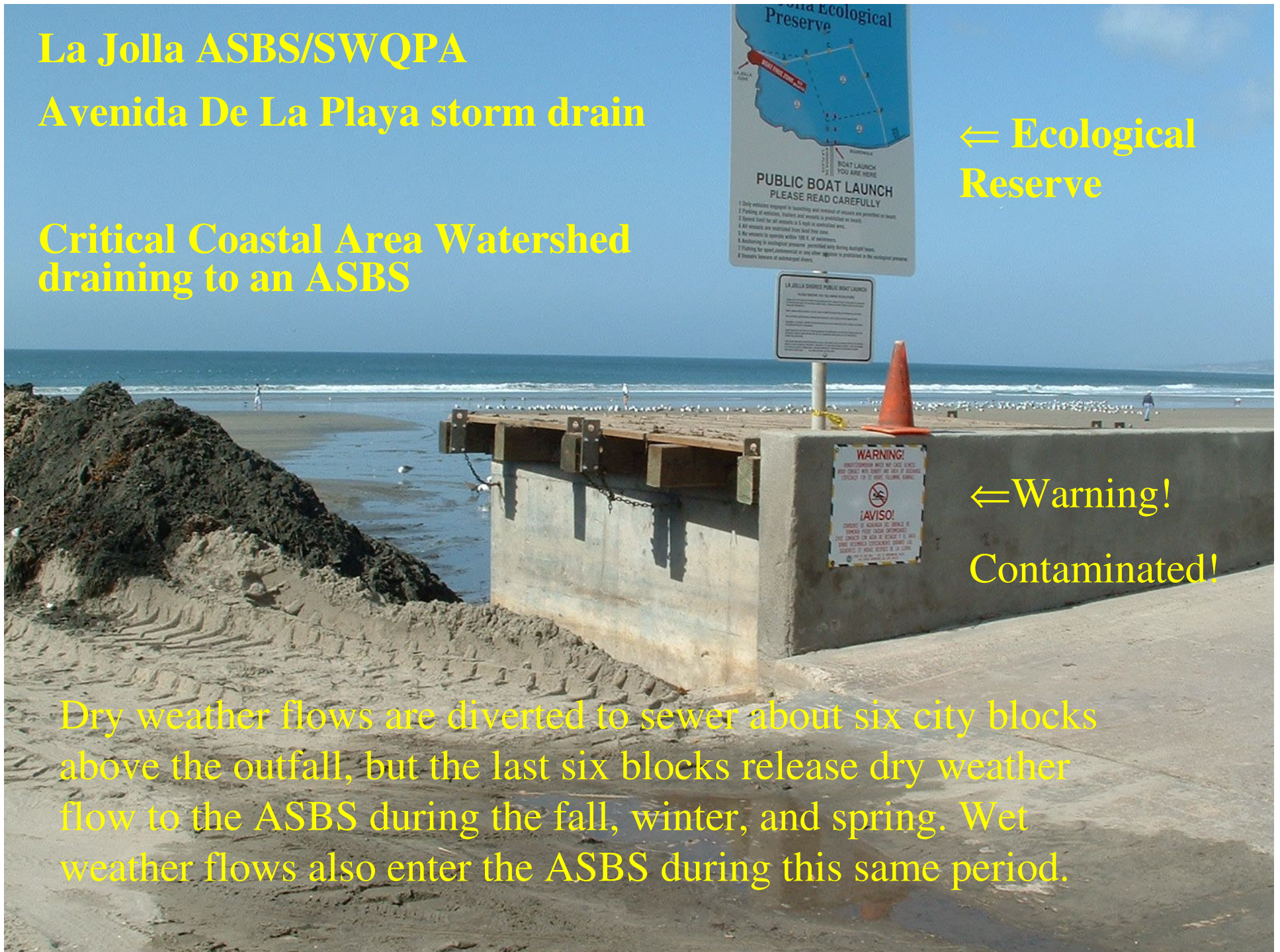
Avenida De La Playa storm drain

**Critical Coastal Area Watershed
draining to an ASBS**

⇐ **Ecological
Reserve**

⇐ **Warning!
Contaminated!**

Dry weather flows are diverted to sewer about six city blocks above the outfall, but the last six blocks release dry weather flow to the ASBS during the fall, winter, and spring. Wet weather flows also enter the ASBS during this same period.



State Water Board Timeline: Projected Dates, Consolidated Grants

- Anticipate Adoption of Guidelines: *January 4, 2006*
- Solicit Concept Proposals: *January 5, 2006*
- Concept Proposals Due: *February 9, 2006*
- Full Proposal Invitations: *March 2006*
- Full Proposals Due: *May 2006*
- Ocean Protection Projects to Ocean Protection Council: *June 13, 2006*
- Recommended Project Lists (in batches) to State Water Board and California Bay-Delta Authority: *July-November 2006*
- Grant Agreements: *August 2006-2007*

Slide 18 added January 13, 2006